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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/573,741

03/28/2006

Joukje Garrelina Orsel

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12/02/2008

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

CHIN, CHRISTOPHER L

ART UNIT

PAPER NUMBER

1641

MAIL DATE

DELIVERY MODE

12/02/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/573,741

Applicant(s)

ORSEL ET AL.

Examiner

Christopher L. Chin

Art Unit

1641

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-17 and 22 is/are rejected.
- 7) ☒ Claim(s) 18-21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group II – claims 10-22 in the reply filed on 7/31/08 is acknowledged.

Claims 1-9 have been cancelled.

Claim Rejections - 35 USC § 112

2. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17 is vague because it is not clear as to when the sample liquid is removed.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 10, 11, 14, 15, 16, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Hefti.

Hefti (US Patent 6,368,795 B1) discloses systems and methods for detecting molecular binding events including the steps of providing a signal path and a molecular binding layer, which is formed along the signal path. A test signal is propagated along the signal path and couples to the molecular binding layer. In response to the coupling, the signal exhibits a response which is indicative of both the molecular binding event and the molecular binding layer itself (col. 3, lines 34-48). The molecular binding layer can be specific binding reagents, such as antigens and antibodies (col. 7-10). The test signal refers to a signal propagating at any useful frequency defined within the electromagnetic spectrum and at least 1 MHz (col. 11, lines 5-10). Figure 1A shows a basic embodiment of the disclosed system comprising a signal source (110), transmission lines (120), a ground plane (130), a bio-assay device (150), and signal detector (160). The bio-assay device (150) comprises a supporting substrate (151) onto which a conductive layer (153) is disposed. The conductive layer (153) forms an interface for supporting propagation of a test signal. A molecular binding layer (MBL) (156) is coupled to one or more areas of conductive layer (153). MBL (156) is composed of one or more ligands that bind to analytes. The rest of the bio-assay device comprises a dielectric substrate (158) and a ground plane (159) (col. 12). The conductive layer (153) is composed of gold, silver, etc (col. 14, lines 50-67). Standards and/or standard curves can be used for comparison with assay results (col. 18, lines 22-32, and 49-60; and col. 33, lines 20-48). Quantities that can be monitored to indicate a change in dielectric properties in the bio-assay device include amplitude, phase,

frequency, dispersion, loss, permittivity, susceptibility, impedance, propagation speed, and dielectric constants (col. 33, lines 9-14).

5. Claims 10, 12, 13, 14, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Hintsche et al.

Hintsche et al (PGPub US 2002/0028441 A1) discloses a method for the detection of molecular species. The method is carried out with an arrangement which has an ultra-microelectrode array whose electrode structures are arranged so closely next to one another that they approach the size of large molecule complexes. Use is, in particular, made of the effect that it is possible for alternating electric fields to be produced between closely neighboring electrodes and the resulting current is predominately affected by the detected molecules and molecule complexes in the area close to the electrodes (see paragraphs [0001] and [0009]). The ultra-microelectrode arrays may consist of thin layers of noble metals, such as gold (see paragraph [0011]). An alternating current may be applied to the ultra-microelectrodes (see paragraph [0012]). Between the ultra-microelectrodes, the electric field employed for detection may be produced by alternating current with frequencies of between 1 mHz and MHz (see paragraph [0013]). A sandwich assay is disclosed where specific binding reagents are immobilized on the ultra-microelectrodes (see paragraph [0021]). The measurement principle, and the change in the electric field, make it possible in principle to distinguish the structure and nature of the molecules by means of quantitative analysis of the impedance spectrum. Differentiation according to type and size of the molecules is

possible through quantitative evaluation and, in particular, by calibration of the impedance spectra using known molecular species (i.e. reference signals) (see paragraph [0023]).

Allowable Subject Matter

6. Claims 18-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher L. Chin whose telephone number is (571) 272-0815. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Shibuya can be reached on (571) 272-0806. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher L. Chin/
Primary Examiner, Art Unit 1641

11/24/08